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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,605

08/09/2007

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EXAMINER

ABDOSHI, SAMIR

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,605	<b>Applicant(s)</b> LEEMING, DAVID WILLIAM	
	<b>Examiner</b> SAMIR ABDOSH	<b>Art Unit</b> 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/24/2008</u>  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

This communication is a first office action non-final rejection on the merits.

Claims 1-28 as originally filed, are currently pending and have been considered below.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4 -6 and 15-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, various terms such as "*high*", "*low*", and "*soft*" are used to describe several physical properties expected of the net strand elements, and render the claim indefinite since such terms are considered to be relative in nature. The Applicant fails to disclose how such terms are defined in a definitive or quantitative manner, such as through a range of acceptable values. One of ordinary skill in the art would thereby be incapable of ascertaining what is meant by "*high*", "*low*", and "*soft*" in the same manner understood by the Applicant. For purposes of examination, the terms will be construed using their broadest reasonable interpretation, however corrective action is required.

Claims 15 and 16 are indefinite for failing to particularly point out the applicants invention. In these claims, the size of the net are defined by the size of an unknown, unclaimed structure. Therefore one cannot adequately determine the scope of the claim until after the claim is put into use. Note that shaped charge warheads come in many difference sizes.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 7, 9, 14-20, and 24-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Nixon (US 6,843,197).

**As per claims 1, 2, 7, 9, 24 and 27**, Nixon teaches armor comprising at least one woven textile section, comprising a knotted net formed from a plurality of interconnecting strands, and corresponding supporting means (see Figure 5, the woven textile section is taught in the form of a knotted wire mesh net, which is supported by the barrier net support structure for each barrier module), wherein the arrangement is such that the textile section is fully extended in a wrinkle free manner.

**As per claims 3-5**, Nixon teaches that each net is supported near two adjacent corners, such that the body of the net hangs below (the net is supported at the corners of posts **100, 102, 104, 106, 108** and compression brace **136**) and that the net strands comprise plastic fibers (a 'synthetic' material is taught as an alternative to a wire mesh, and is considered to include plastics as plastics are synthetic compounds having physical properties including a relatively high tenacity, see col. 3, ll. 43-51).

**As per claims 13 and 14**, the capability of the armor described in the claim is considered to be an intended use which is not considered to be a limiting statement (see *MPEP* § 2106 II. (C)), nevertheless the structure is taught in that Nixon teaches

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that the textile armor system is configured to disable munitions and explosives used to attack a target (see col. 2, ll. 16-25).

**As per claims 15 and 16**, Nixon teaches that the circumference of each individual mesh section is less than two-thirds the maximum circumference of the nose cone of a shaped charge warhead (Figures 5, 6a, and 7 illustrated a very fine mesh netting, which is considered to be much smaller than two-thirds of the maximum circumference of any known munition nose cone).

**As per claims 17-20, 25, and 26**, Nixon teaches an interconnected rigid support frame (via fence posts **100, 102, 104, 106, 108** and compression/tension braces **136** and **138**) wherein the netted textile section is attached at a plurality of evenly spaced attachment points (see Figures 5, 6a, and 7).

Additionally, the system is taught to further include a “standoff distance” that allows for the momentum of an approaching munition to be absorbed prior to coming into contact with the protected target (thereby providing what is considered to be *inertial support* for the system, see col.2, ll. 16-25).

**As per claim 28**, Nixon teaches wherein the armor is system is deployed to provide a screen between a target object and an incoming projectile (see Figure 1).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nixon (US 6,843,197), as applied in claim 4, further in view of Shirakawa (US 2006/0014920).

**As per claim 6 and 10-12**, Nixon teaches net strands comprising plastic fibers, but fails to explicitly teach that the fibers polyethylene.

Shirakawa discloses a polyester multifilament yarn material that teaches a fibrous strand material, comprising polyethylene chips, having a diameter of about 3 mm (see paragraph 142).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to substitute the plastic fiber material taught by Nixon with the polyethylene strands taught by Shirakawa since it is taught that the use of polyethylene resins are widely used in fibers for their excellent mechanical and physical properties (see paragraph 2).

7. Claims 8 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nixon (US 6,843,197).

**As per claim 8**, Nixon teaches a net comprising a knotted construction, but fails to teach a net comprising a knotless construction.

Although Nixon fails to teach such an alternative, it is evident through the Applicant's specification that a knotless construction is simply an alternative to either a woven or knotted configuration. That being said, a knotless configuration is considered to be an obvious shape change of a known element (the net) that bears no significant impact on the result or performance of the invention. The Applicant is reminded that

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changes in shape must have a new or unexpected function in order to be considered patentable (*In re Hanlon*, 128 USPQ 384).

**As per claim 23**, Nixon teaches an armor system capable of disabling a projectile, but fails to explicitly teach that the system is capable of disabling a projectile traveling at a rate of 300 meters per second.

Although Nixon fails to teach such a velocity range, it appears as though the traveling rate of 300 meters per second is a futile limitation based on the specification (page 11, lines 9-10 of the specification state *"Testing has shown at that at most velocities, the frame structure plays no part in disabling the RPG warhead. In fact, it is believed that a velocity of 300m/s, the warhead is disabled and the RPG has broken the net mesh before the load is transmitted to the frame"*). That being said, the Applicant has failed to disclose the criticality of such a velocity range and how it is essential to the invention. Therefore, it would be unreasonable to expect one of ordinary skill in the art at the time the invention was made to successfully achieve a textile armor capable of such an arbitrary range without undue experimentation.

8. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nixon (US 6,843,197), as applied in claim 1 above, further in view of Ruter (US 3,069,796).

**As per claims 21 and 22**, Nixon teaches a netted textile armor section, but fails to teach that the section is provided with camouflage garnishes or coloring.

Ruter discloses camouflage material that teaches camouflage nets garnished with colored strips are well-known and widely used in military applications (see col. 1, ll. 11-27).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the net taught by Nixon to include the camouflaging pattern taught by Ruter in order to provide a sheet of textile or plastics which with a camouflaged effect (see col. 1, ll. 28-46).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMIR ABDOSH whose telephone number is (571) 270-5799. The examiner can normally be reached on Monday through Friday 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on (571) 272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a



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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael J. Carone/  
Supervisory Patent Examiner, Art Unit 3641

/SIA/